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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,712	09/29/2003	Lawrence Salant	455610-2580.1	2458

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EXAMINER	
MERANT, GUERRIER	
ART UNIT	PAPER NUMBER
2117	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,712	SALANT ET AL.	
	Examiner	Art Unit	
	Guerrier Merant	2117	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments/amendments with respect to claims 1-18 have been fully considered but they are not persuasive. Therefore, the Examiner maintains prior rejections of the claims.

Response to Arguments

2. Applicants contend that " Figure 1 of the **Tan et al** patent, as well as other significant portions of the **Tan et al** patent, are not found in the **Tan et al** provisional application...Therefore...**Tan et al** patent is not prior art to the present application." The Examiner respectfully disagrees. Figure 1 of the **Tan et al** patent depicts a block diagram of an embodiment of the invention, which was described in the flow diagram of figure 5 of the **Tan et al** provisional application and which is disclosed in figure 4 of the **Tan et al** patent. Therefore, for the reasons mentioned above, the Examiner submits that the **Tan et al** patent is prior art to the present application and that prior rejections are maintained.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined

application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-4, and 10-13 are provisionally rejected under the judicially create doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 8-10 and 17-21 of copending Application No. 10/673,735, and claims 1-4, 7 and 9 of copending Application No. 10/673,713. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the limitation of the rejected claims are claimed in at least one of the claims 1-4, 8-10 and 17-21, and claims 1-4, 7 and 9 of application' copending applications, and there is no reason why the rejected claims could not have been presented in the copending applications 10/673,735 and 10/673,713.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims Comparison Table

	10/673,712	*10/673,735*	*10/673,713*
Claims:	1	1	1,2,3,4,7,9
	2	2,3,4	
	3	8,9	
	12	10	
	10	17	1,2,3,4,7,9
	4,13	18,19,20	
	11	21	

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

6. Claims 1, 5, 8-10, 14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tan et al. (US 6,812,688)** and further in view of **Mojoli et al. (US 4,615,040).**

1, 5, 8-10, 14, 17 and 18: **Tan et al.** discloses a method or an apparatus for determining a bit error rate based on an oscilloscope comprising the steps of:

a) acquiring a data signal by an acquisition unit of a test instrument for a predetermined period of time *(Acquisition unit, item 120- it is obvious that data are being acquired within a limited period of time –see col. [0018])*;

b) storing said data signal in a memory of said test instrument *(Tan et al. discloses an acquisition memory supporting acquisition unit 120- therefore, it is inherent that the acquiring data are stored in that supporting acquisition memory before performing eye diagrams, mask testing, time interval error and PLL function [0026, lines 10-17])*;

c) recovering a clock signal from said stored data signal *[0021]*;

d) slicing said stored data signal into a plurality of data segments of a predetermined length in accordance with said recovered clock signal *([0018, data signals are divided into portions and are then provided to the processing and display controller 130 as a first acquired sample stream AS1. Also the data frames are being tested by eye diagram and mask tests which display multiple short waveform segments of the frame 0004)*;

e) synchronizing each of said data segments to align them to a frame or predetermined pattern *(referring to Fig.1 once the data signals are provided to Pocessing And Display Controller 130, multiple functions are being invoked such as eye diagram which is a visual overlay of multiple data symbols aligned in time on a display device [0004])* but **Tan et al** fails to disclose determining a bit error rate thereof; and comparing each of said data segments to said predetermined pattern on a bit by bit basis. However, **Mojoli et al.** discloses a transmission system wherein data signals are

separated into a plurality of frames comprising a comparator for comparing the digital bits in each of the sub-streams to the selected sequence *(col. 3, lines 22-33 & col. 13, lines 47-65- see Fig. 11). Therefore at the time of the invention, one of ordinary skill in the art would have found it obvious to test the data frames (bits by bits) stored in the supporting acquisition memory of* **Tan et al.** in order to minimize propagation of error in the receiving data.

Claims 4 and 13: **Tan et al** and **Mojoli et al.** discloses a method or an apparatus as in claims 1 and 10 above, further comprising the steps of: determining a position of each bit error in a frame and displaying said position of each determined bit error in an x/y display of said frame *(bit errors in frames could be detected with the eye diagram function 134 which displays the digital data signals on the oscilloscope x/y plane;* ***Tan et al.*** *Fig. 1).*

Claims 7 and 16: **Tan et al** and **Mojoli et al.** discloses a method or an apparatus as in claims 1 and 10 above, wherein said predetermined pattern is a pseudo-randomly generated bit sequence *(col. 6, lines 3-15;* **Mojoli et al**)

7. Claims 2, 3, 6, 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tan et al. (US 6,812,688)** and **Mojoli et al** further in view of **Verboom (US 6407970).**

Claims 2, 3, 11, and 12: **Tan et al.** and **Mojoli et al.** disclose a method or an apparatus as in claims 1, 6, and 10 above, but **Tan et al.** and **Mojoli et al** do not disclose the recovery step to further comprises the steps of: defining a threshold value for decoding the serial data signal; comparing each portion of the stored data signal to said threshold level; determining pairs of adjacent samples that straddle said threshold; and estimating a time of crossing said threshold between said adjacent samples to obtain a series of observed times of threshold crossing. However, **Verboom** discloses a data recovery of storage systems comprising *a threshold detector receiving data samples from the read logic of the optical storage system. Wherein these data samples are applied to a threshold to create a preliminary determination regarding the data. Specifically, the data is preliminarily determined to be either a 1 or 0 based upon a raw threshold determination (col. 3, lines 3-14).* Also **Verboom** discloses a conventional method of detecting recorded data using a threshold. For instance, *channel bits of an optical read channel (using, for example, 1,7 run-length-limited modulation coding) are detected by comparing a read signal to a predetermined threshold: if the read signal exceeds the threshold at a particular channel-bit location, that channel-bit is considered a `1` (i.e., a mark); otherwise the channel-bit is considered a `0` (i.e., a space) (col. 1, lines 50-57).* Therefore at the time of the invention, one of ordinary skill in the art would have found it obvious to set a threshold level in the oscilloscope of **Tan et al.** in order to reduce the effect of jitter on the received signals and provide an accurate representation of the signals.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Merant Guerrier whose telephone number is (571) 270-1066. The examiner can normally be reached Monday through Thursday from 10: 30 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques, can be reached on (571) 272-6962. Draft or Informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 270-2066.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Guerrier Merant
06/20/07

GUY LAMARRE
PRIMARY EXAMINER